

(別紙1)

## 論文の内容の要旨

論文題目 Native Writing Systems in the Okinawan Islands

沖縄諸島の土着書記体系の研究

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This is a study of the various pre- and partial writing systems invented by the people of the Okinawan islands, from ancient times to the turn of the twentieth century.

We will read no great sagas or even melancholy tales of the arduous years of subjugation, though the latter can be seen “between the lines” in the tax records that make up many of the examples we will explore. We see only record-keeping systems that began with simple tally marks and expanded, but only as far as more detailed records.

Each of the systems we will examine shares commonalities with other scripts in other human civilizations. The knotted ropes and tally marks from the main island have features that can be seen in many other such systems in other cultures both past and present. The more advanced system of written characters, which arose out of a somewhat more sophisticated system of tally marks in the Yaeyamas, began to develop more advanced features, taking on many speech-like features as its expressiveness increased, but never reaching the point where it could be called “full writing”.

## Outline

After an explanation in Chapter 1 of the language situation in the Yaeyamas and on Yonaguni, where the most advanced native writing systems were developed, in Chapter 2 we will review the historical background, starting with a **summary of previous research** on native writing systems in Okinawa. Scholars based on the Japanese mainland, such as Antei Tashiro and Basil Chamberlain, were able to describe the *sūchūma* tally sticks of Shuri, but with the Yaeyamas and Yonaguni less accessible, records of the more innovative systems developed there are sparser.

Chapter 3 describes the **demographics of the Further Isles** and the **tax regime** under which the people of the Yaeyamas lived from the early 1600s to 1903. Demands for rice, fabric, and other contributions from the Satsuma overlords, and fraud from these officials, were one impetus behind the islanders creating their own record-keeping systems.

In Chapter 4, we will begin our study with an example of pre-writing: the **warazan ropes** that have been in use both on the main island and in the Yaeyamas (where they are called *barazan*) for centuries. In the Yaeyamas in particular, attempts were made to extend what these ropes could express. Going beyond simple numbers and quantities, clever record-keepers even tied pieces of straw into the shapes of animals.

Chapter 5 discusses the oldest and most basic of all the forms of native written signs in the Ryukyus: ***sūchūma* tally numerals**. Combined with symbols called *yāban* which indicated families, these signs counted money, firewood, and rice. The earliest evidence for their existence stretches back to a 13th-century reference to Miyako islanders using them in trade with China. Our study will first review **the three systems of signs** (5.2.2), which differ based on what is being counted, and we will **re-analyze them** using native measurements rather than the Japanese ones first discussed by Chamberlain, who viewed the numerical system as being quinary. We will show that native measurements allow for a purely decimal system. **Four previously-unknown tally sticks** will be analyzed (5.2.4) with three (5.2.4.1, 5.2.4.3, 5.2.5.2) conforming with established counting systems but with another being written in what is possibly an **undiscovered system**. A possible analysis will be offered (5.2.4.2) for this mysterious stick.

Additionally, one newly-discovered tally stick from the village of Awase contains pictographs which may be **a bridge to the *kaida* writing system**, used in the Yaeyamas and on Yonaguni, that we will later describe in detail.

In Chapter 6, we will visit **a system of characters used to express volumes** in the Yaeyamas, also called ***sūchūma*** but differing in form. These signs, initially used on bilingual tax notices sent to islanders, eventually came to be used in related areas such as sales totals, personal possessions, and festival contributions. We will look at **several of these surviving bilingual boards**, along with several others that remain only in photographs. This simple system of repeated marks did not remain static: islanders introduced various labor-saving innovations and eventually integrated this system into a

larger and more expressive system that became *kaida* writing.

Chapter 7 will introduce the next element that contributed to *kaida* writing, and the element of local writing that remains in use today: the ***dahan* marks** (also called *yaban* in the rest of the Yaeyamas and Okinawa; *dahan* is the Yonagunian pronunciation) **used to indicate houses or families**. Having origins in the distinctive cuts made to the ears of livestock to show ownership, these signs were created by each family and often written on or scratched into tools and other personal items to indicate possession. The *sūchūma* we saw in the preceding section enabled users to count quantities and volume, but still required Japanese writing for details like the name of the taxpayer: *dahan* made it possible to indicate both natively. The structure of *dahan* will be explored, as will the **local pronunciations of them**, and a full list of *dahan* on Yonaguni, created by local resident Yukio Nishime in the 1990s, will later be used as a basis for a thorough investigation of several heretofore undiscovered documents.

Chapter 8 introduces the ***kaida* writing system**, the most expressive stage of partial writing reached by the islanders. *Kaida* writing is made up of four types of glyphs: the *kaida sūchūma* described in Chapter 6, the *dahan* described in Chapter 7, a set of about 70 to 80 pictographs devised by islanders, and a set of numerals and other characters used in dates, derived from Chinese and Japanese. We will describe each of these subtypes in detail and examine how they are used.

Together these elements combine to create expressions that show the names of people, what they own or are obliged to pay and how many or how much, and the dates on which such holdings were recorded. Such expressions, several examples of which will be taken up in 8.2.4, make up the bulk of the known *kaida* writing corpus, but there have been examples of islanders trying to extend it further, such as to postal packages, and we will also explore these expressions. While little phonetic information is to be seen in *kaida* writing, we will also examine the local pronunciations of several phrases.

In Chapter 9, we shall attempt to read **the first of two previously-undiscovered documents** written in the *kaida* system. These are stored in the National Museum of Ethnology in Osaka. Armed with the knowledge gleaned in the preceding three chapters, the first document is immediately readable, and we shall provide a full translation. The second one is a multi-family record spread across several months, and contains many *dahan*. We will match the *dahan* with family names (leaving unmatchable *dahan* with provisional numbers) and read the dates and *kaida* pictographs. A **previously-unknown**

**method of counting chickens and eggs** seems to be used, and we will make an attempt at understanding it.

Chapter 10 is the **second set of previously-undiscovered documents**, stored at the University of the Ryukyus. The first part is a list of some *kaida* numerals and pictographs, plus a few expressions, copied by a Japanese-writing person. This person adds valuable commentary about the stroke order and stroke direction of *kaida* numerals, which differs occasionally from the established conventions of Chinese and Japanese. The second is a lengthy document whose first half is much like previously-seen records of families and their holdings of rice, fish, and other items. Its second half is a record of people: *dahan* are followed by repetitions of the "person" character (and occasionally items such as rope, fish, or rice). This and the second document in Chapter 9, each hundreds of characters long, are **the most complex *kaida* documents surviving today** and are a priceless addition to the corpus.

Chapter 11 will discuss the **decline of *kaida* writing** which began with the introduction of Japanese schooling in the late 1800s and the abolition of the capitation tax in 1903. Today only the elderly residents can remember the age of *kaida* writing, and even they have imperfect knowledge, as the generation who wrote original records in *kaida* characters has passed away and today's elderly report only, during their childhoods, seeing their parents or grandparents carrying such records around. Nae Ikema (b. 1919) is perhaps the last person with a detailed knowledge of the pictographs that Yonagunians developed. We will conclude with **a short examination of *sūchūma* and *kaida* writing in context** with other ancient scripts.

In Appendix 1, we will discuss **how to adapt the writing system of the Yaeyamas for the digital age**. A font, which is used throughout this work, has been created, and in a second Appendix a proposal for its inclusion in Unicode's multilingual plane for obsolete scripts will be presented. In addition, an input method editor that allows users to type *kaida* characters using either their Yonaguni or Taketomi pronunciations will be offered. A second Appendix consists of a proposal to include these characters in Unicode.